

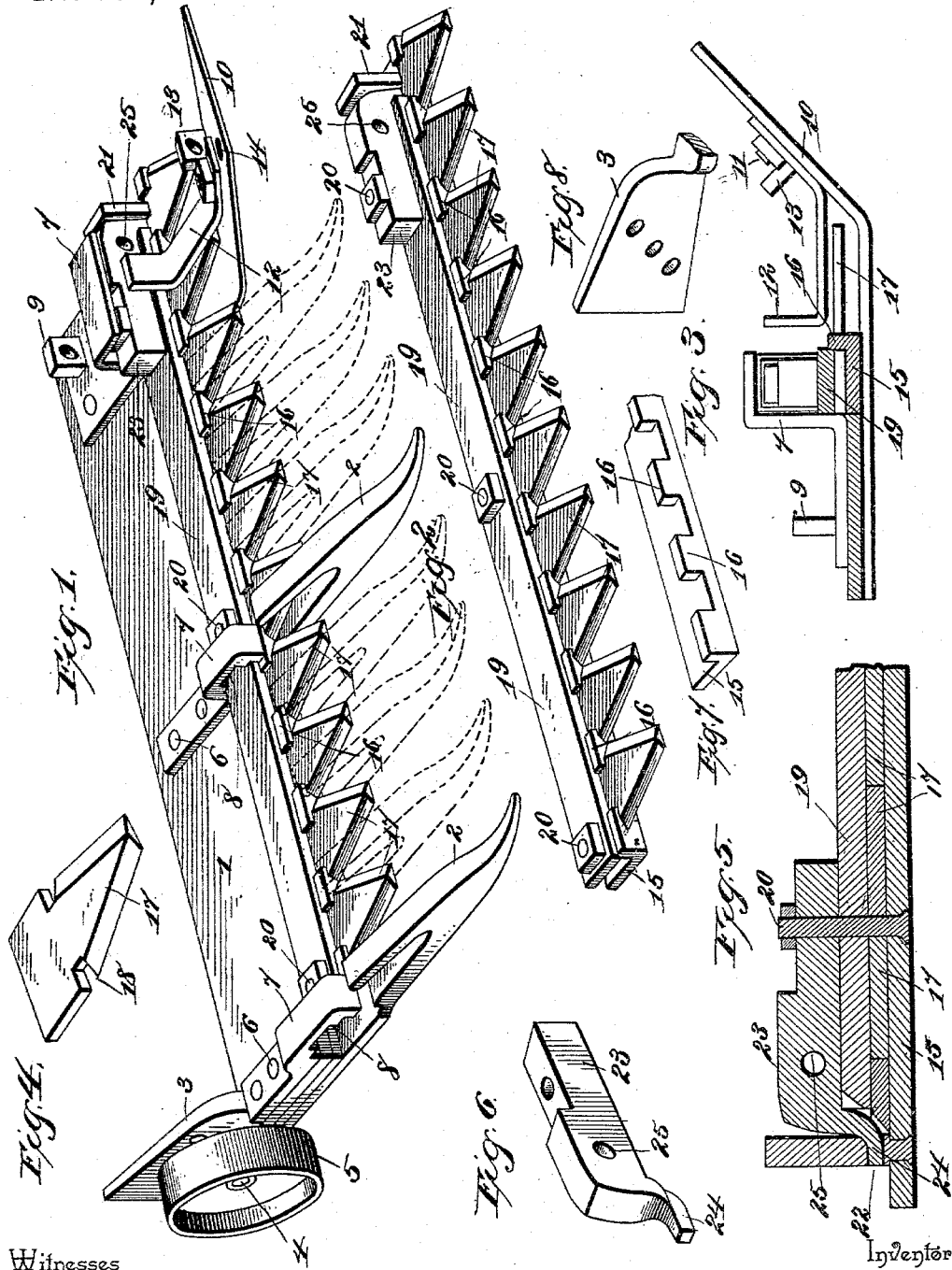
(No Model.)

L. KING.

CUTTING MECHANISM FOR MOWERS OR REAPERS.

No. 490,024.

Patented Jan. 17, 1893.



Witnesses

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# UNITED STATES PATENT OFFICE.

LUZERNE KING, OF SOUTH SIOUX CITY, NEBRASKA.

## CUTTING MECHANISM FOR MOWERS OR REAPERS.

SPECIFICATION forming part of Letters Patent No. 490,024, dated January 17, 1893.

Application filed January 15, 1892. Serial No. 418,153. (No model.)

*To all whom it may concern:*

Be it known that I, LUZERNE KING, a citizen of the United States, residing at South Sioux City, in the county of Dakota and State of Nebraska, have invented a new and useful Cutting Mechanism for Mowers or Reapers, of which the following is a specification.

This invention relates to cutting mechanisms for mowers or reapers; and the objects in view are to provide such a mechanism designed for use in connection with any of the standard makes of machines; to construct the cutting mechanism in such manner as to permit of the sharpening of a knife or cutter without danger of injury to the adjacent knives or cutters; to provide for a removal of a broken knife or cutter and its replacement by another; to obviate any looseness of the knives or cutters or the loss of any of the fastening devices for the same, and to provide an improved eye for connection with the pitman for operating the cutter-bar.

Other objects and advantages of the invention will appear in the following description, and the novel features thereof will be particularly pointed out in the claims.

Referring to the drawings:—Figure 1 is a perspective of a cutting apparatus constructed in accordance with my invention. Fig. 2 is a detail in perspective of the cutter-bar. Fig. 3 is a transverse section of Fig. 1. Fig. 4 is a detail in perspective of one of the teeth or knives. Fig. 5 is a detail in section of the pitman-eye and adjacent parts. Fig. 6 is a detail in perspective of the eye. Fig. 7 is a detail view of a portion of the cutter-bar detached; and Fig. 8 is a similar view of the bearing-arm 3.

Like numerals of reference indicate like parts in all the figures of the drawings.

1 designates the finger-bar, to which is riveted at intervals the series of guards or fingers 2 of ordinary construction. At the outer end of the bar, by the same fastening means in this instance as the outer guard or finger, is secured a rearwardly-disposed bearing-arm 3, having one or more perforations in any one of which a stub-axle 4 may be located. The perforations as a series are inclined, so that by adjusting the axle in the various perforations, the small wheel 5 will be raised and lowered, thus bringing the finger-bar and the

mechanism supported thereby and hereinafter described, into position to make various cuts. The inclined series of perforations enables the wheel 5, as the adjacent end of the finger-bar is lowered, to be brought toward the front or closer to the end of said bar, whereby the ends of the adjacent fingers are prevented from coming in contact with the ground by the spring or elasticity of the frame.

At intervals along the finger-bar are located and secured keepers 7. These keepers have their front ends extending over the plane of the lower sides of the fingers or guards, and have their inner faces recessed, at 8, so as to receive the cutter-bar and form a passage-way for the same and its nuts. That keeper at the inner end of the cutter-bar has an eye 9, located thereon, and the same is designed to engage with the usual supporting or brace-rods, leading from the mower or reaper. An arm 10 projects from the underside and at the inner end of the finger-bar, and is upwardly curved as shown. This arm has pivoted by means of a bolt 11, a swinging latch or keeper 12, inwardly disposed and upwardly curved. By swinging this latch or keeper to the front, the cutter-bar hereinafter described may be inserted in position, after which a return of the swinging keeper serves to aid in a retention of the cutter-bar, or in other words, takes the place of a finger or guard, which is absent at this point by reason of the presence of the arm 10.

An eye 13 and a perforation 14 are provided, in addition to eye 9, for the reception of the ordinary brace-rods leading from the mower or reaper. Said rods may be arranged in any preferred manner, and as the manner of connecting my improved cutting-mechanism to the mower or reaper forms no part of this invention, said brace-rods are not shown in the drawings.

15 designates the cutter-bar, the front edge of which is provided at intervals with rectangular lugs 16.

17 designates a tooth or cutter, which has the usual arrow-shape and has its opposite edges near its butt provided with notches 18. These teeth fit between the lugs of the cutter-bar and the notches of the teeth receive the lugs, whereby the teeth are secured against

lateral or longitudinal movement. When the teeth are in position, a clamping-bar 19 surmounts the series of teeth, immediately in rear of the lugs, and through the clamping-bar between the teeth and through the cutter-bar, are at intervals passed bolts 20, whereby the entire series of cutters or knives are securely clamped in position. By means of such clamping arrangement, any one or a series of the teeth may be removed for the purpose of repair or replacement, and in grinding one tooth, injury to the adjacent teeth is avoided; and furthermore inasmuch as each tooth is not fastened by an independent bolt or rivet, but by a common clamp, the liability of loose rivets, &c., is also avoided.

At the inner end of the cutter-bar, there is located a vertical post 21, provided near its base or immediately above the adjacent knife or cutter, with a mortise or opening 22.

23 designates a metal-block; which I have termed a pitman-eye, and the same surmounts the clamping-bar at its inner end, and is secured in position by one of the bolts 20 heretofore mentioned. The clamping-bar terminates short of the post 21, and into the intermediate space formed by such termination, is a bayonet-shaped tenon 24, which is formed upon the under side and at the end of the pitman-eye, and at its extremity engages with and fits the mortise 22. The eye is provided with a perforation 25, with which the pitman-bolt engages.

It will be seen that by the construction of pitman-eye shown, the same may be readily removed when worn and a new one substituted, thus obviating the necessity now existing of making trips to the blacksmith with the cutter-bar, when repair to the eye is required; and furthermore that in order to remove the eye but one nut need be removed. Although the eye is thus secured by one bolt, yet by inserting its front end into the mor-

tise of the post its strength is exceedingly great, and its durability and positiveness of action greatly improved.

Having described my invention, what I claim is:—

1. The combination with the cutter-bar, and a post arising therefrom and provided with a mortise, of a pitman-eye removably mounted on the bar and provided at its front end with a tenon engaging the mortise of the post, and a bolt passed through the bar and eye and provided with a nut, substantially as specified.

2. The combination with the cutter-bar, having the series of lugs arranged at intervals, the post having a mortise and rising from the end of the bar, the series of cutters notched and fitted between the lugs and the superimposed clamping-bar having one end terminating short of the post, of the pitman-eye consisting of a metal-block, having a perforation for the reception of the pitman-bolt, said eye being provided at its front lower corner with a bayonet-shaped tenon, taking between the clamping-bar and post and fitting in the mortise of the latter, and a clamping-bolt passed through the pitman-eye, clamping-bar and cutter-bar, substantially as specified.

3. The combination with the finger-bar, the series of fingers or guards and the keepers, of the reciprocating cutter-bar, the curved arm extending from the finger-bar opposite the end-keeper thereof, and the curved keeper pivoted to the bar at its front end and adapted to be swung rearwardly over the cutter-bar, substantially as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

LUZERNE KING.

Witnesses:

C. S. HOLLMAN,  
J. E. EASTON.